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WHAT IS CLAIMED IS:

1. An electrosurgical instrument for use with a robotic arm, the instrument comprising:

a body;

a wrist body that is rotatably coupled to the body about a first axis;

a pair of opposed end effectors rotatably coupled to the wrist about a second axis, wherein the pair of end effectors being movable between an open position and a closed position;

a first electrode coupled to one of the end effectors; and

a second electrode coupled to one of the end effectors, wherein the first and second electrodes are in a spaced configuration when the end effectors are in the closed position.

2. The electrosurgical instrument of claim 1 further comprising an actuating device to move the pair of end effectors between the open and closed position.

3. The electrosurgical instrument of claim 2 wherein the actuating device comprises drive member(s) and pulley(s).

4. The electrosurgical instrument of claim 3 further comprising a robotic interface attached to the body for interfacing with a robotic manipulator assembly.

5. The electrosurgical instrument of claim 1 comprising first and second conductive leads that are coupleable to the first and second electrodes to a power source.

6. The electrosurgical instrument of claim 5, wherein the conductive leads extend through lumens in the body and wrist

7. The electrosurgical instrument of claim 5 wherein first and second conductive leads electrically connect the electrosurgical power source to the electrodes, wherein at least one of the conductive leads is removably attachable to the corresponding electrode.

8. The electrosurgical instrument of claim 1 wherein the pair of end effectors comprise a corresponding pair of jaws including a corresponding pair of opposed,

conductive grip surfaces, the jaws being arranged so that the respective grip surfaces are adjacent one another when the end effector is in the closed position.

9. The electrosurgical instrument of claim 8, wherein the jaws comprise a conductive material, and each jaw is coupled to the instrument by mounting to a corresponding non-conductive pulley member.

10. The electrocurgical instrument of claim 9, wherein the jaws are replacably removably mounted from the end effectors mounted to the pulley members.

11. The electrosurgical instrument of claim 1 wherein the electrodes are substantially planar.

12. The electrosurgical instrument of claim 1 wherein the second axis is substantially orthogonal to the first axis.

13. The electrosurgical instrument of claim 1 wherein the body defines a longitudinal axis that is substantially orthogonal to the first axis, wherein the wrist and end effectors are rotatable about the longitudinal axis

14. The electrosurgical instrument of claim 1 wherein the pair of end effectors are composed of a non-conductive material.

15. The electrosurgical instrument of claim 1 wherein the first and second electrodes are elongate.

16. The electrosurgical instrument of claim 1 wherein the electrodes in the closed position are spaced by a distance between approximately 0.01 inches and 0.10 inches.

17. The electrosurgical instrument of claim 1 wherein the first electrode is positioned within a groove and the second electrode is positioned on a boss.

18. The electrosurgical instrument of claim 1 wherein the first and second electrode are both disposed on the first end effector.

19. The electrosurgical instrument of claim 1 wherein the first and second electrodes are disposed on opposing end effectors.

20. The electrosurgical instrument of claim 1 wherein the first and second end effectors do not penetrate the tissue.

21. The electrosurgical instrument of claim 1 further comprising at least one nonconductive sleeve disposed over at least one of the end effectors, wherein at least one of the first and second electrodes are coupled to the end effectors through the nonconductive sleeves.

22. The electosurgical instrument of claim 21, wherein the sleeves are and electrodes are replacably removable from the end effectors.

23. A method of treating tissue, the method comprising:

providing a first end effector and a second end effector, the first and second end effectors having a first electrode in a groove and a second electrode on a boss;

gripping the tissue between the first and second end effectors;

applying a current to the first and second electrodes to cauterize the tissue.

24. The method of claim 20 further comprising tensioning the tissue to cut the tissue.

25. The method of claim 23 wherein gripping comprises rotating the first end effector and second end effector about at least two axes.

26. The method of claim 23 wherein gripping comprises robotically actuating grip drive members of the first and second end effector.

27. The method of claim 26 wherein applying comprises delivering a current from an electrosurgical generator through the drive members.

28. The method of claim 23 wherein gripping comprises interdigitating the first and second end effectors, wherein the first and second electrodes are spaced between approximately 0.01 inches and 0.10 inches.

29. The method of claim 23 wherein the first electrode is positioned on the first end effector and the second electrode is positioned on the second end effector.

30. The method of claim 23 wherein the first electrode and second electrode are positioned on the first end effector.

31. The method of claim 23 wherein gripping comprises interdigitating the first and second end effectors.

32. The method of claim 31 wherein interdigitating comprises tensioning the tissue gripped between the end effectors.

33. The method of claim 23 wherein the current is less than 1 amp.

34. The method of claim 23 further comprising coupling the end effectors to a robotic manipulator.

35. An electrosurgical tool for use with a robotic surgery system, the tool comprising:

a body comprising a proximal portion and a distal portion, wherein the proximal portion comprises an interface for coupling to a robotic manipulator assembly;

a first and second opposing grips rotatably coupled to the distal portion of the body;

nonconductive sleeves disposed over the opposing grips;

a first and second electrode disposed on the nonconductive sleeves;

conductive leads that connect the first and second electrodes to an electrosurgical power source; and

an actuation mechanism coupled to the first and second grips to move the first and second grips between an open position and a closed position.

36. The electrosurgical tool of claim 35 wherein the grips are coupled to the body through a rotatable wrist.

37. The electrosurgical tool of claim 35 wherein the grips in the closed configuration positions the first and second electrode in a spaced configuration.

38. The electrosurgical tool of claim 37 the spaced configuration of the first and second electrode provides cauterization and cutting of a tissue engaged by the first and second grips.

39. The electrosurgical tool of claim 35 wherein the conductors are at least partially disposed outside of the body.

40. The electrosurgical tool of claim 35 wherein the electrodes are offset when the grips are in the closed position.

41. The electrosurgical tool of claim 35 wherein the actuation mechanism comprises a pulley assembly and at least one drive cable.

42. A method of cauterizing tissue, the method comprising:
coupling nonconductive sleeves over a pair of end effectors;
gripping the tissue with the end effector; and
delivering a current through electrodes disposed on the sleeves to cauterize the gripped tissue.

43. The method of claim 42 comprising electrically coupling the electrodes to an electrosurgical power source through conductive leads.

44. The method of claim 43 wherein gripping comprises robotically actuating the pair of grips.

45. The method of claim 42 comprising tensioning the gripped tissue to sever the cauterized tissue.

46. The method of claim 42 wherein the electrodes comprise first and second electrodes, wherein the first electrode is disposed on a boss and the second electrode is disposed in a groove, the method further comprising interdigitating the first and second electrodes.

47. The method of claim 42 wherein the electrodes comprise first and second electrodes, the method further comprising offsetting the first and second electrodes to prevent shorting.

48. A robotic surgical system comprising:
a base;
at least one robotic arm movably coupled to the base;
an input device configured to control the robotic arm;

a robotic manipulator assembly coupled to the robotic arm and input device;

a surgical instrument coupled to the robotic manipulator assembly, wherein the surgical instrument comprises a shaft, a pair of opposed grips that are moveable between an open position and a closed position, and first and second electrodes coupled to the grips, wherein the grips in the closed position maintain a spacing between the first and second electrodes.

49. The robotic surgical system of claim 48 wherein the electrodes are coupled to the grips through nonconductive sleeves that can fit over the grips.

50. The robotic surgical system of claim 48 wherein the first electrode is disposed in a groove and the second electrode is disposed on a boss.

51. The robotic surgical system of claim 48 further comprising an electrosurgical power supply that is coupled to the electrodes.

52. The robotic surgical system of claim 48 wherein the surgical instrument further comprises an actuation device that couples the grips to the robotic manipulator assembly.

53. The robotic surgical system of claim 48 wherein the surgical instrument comprises a wrist, wherein the grips are rotatably coupled to the shaft with the wrist.

54. A electrosurgical cauterizer comprising:

a body;

a pair of opposed grips rotatably coupled to the body;

first and second electrodes coupled to one of the grips; and

drive members coupled to the pair of grips to move the grips between an open position and a closed position, wherein the drive members electrically couple the first and second electrodes to a power supply.

55. The cauterizer of claim 54 wherein the drive cables are at least partially insulated.

56. The cauterizer of claim 54 further comprising pulleys, wherein the drive members run over the pulleys.

57. The cauterizer of claim 54 wherein at least one of the pulleys and grips are insulated.

58. The cauterizer of claim 54 wherein the first electrode is disposed on a boss and the second electrode is disposed in a groove.

59. The cauterizer of claim 54 wherein at least one of the grips includes a cutting device.

60. A electrosurgical cauterizer for manipulation by a robotic surgical system, the cauterizer comprising:

a body;

a clevis rotatably coupled to the body about a first axis;

a first and second end effector coupled to the clevis about a second axis, wherein the first and second end effectors comprise:

a conductive grip body comprising a proximal portion and a distal portion, wherein the distal portion comprises grip for gripping a target tissue; and

nonconductive pulley disposed around the proximal portion of the grip body for insulating the first end effector from the second end effector;

a first conductive lead coupled to the first end effector and a second conductive lead coupled to the second end effector, wherein the first and second leads are attachable to a power source for delivering energy to the distal portions of the first and second end effectors.